

REMARKS

Reconsideration and allowance of the present patent application based on the following remarks are respectfully requested.

By this Amendment, claims 16 and 17 are added. No new matter has been added. Accordingly, after entry of this Amendment, claims 1-17 will remain pending in the patent application.

Claims 1-7 and 10-14 were rejected under 35 U.S.C. §103(a) based on U.S. Pat. No. 7,070,406 to Jeans in view of WO 99/28132 to Chichoni. The rejection is respectfully traversed.

Claim 1 recites a printing apparatus, comprising, *inter alia*, “a curved member carrying a stamp surface having a plurality of separate curved sides, each of said curved sides including a pattern, wherein, in use, said curved member is configured to roll over a substrate to transfer said pattern on said substrate such that, as said curved member rolls over said substrate, said pattern of each of said curved sides remains stationary relative to each of said curved sides...”

These aspects of claim 1 are amply supported by the original disclosure. As a non-limiting example, one embodiment of the invention shown at Figure 1 of the present application discloses a curved member 25 that includes a patterning stamp surface having three curved sides 30. Each curved side 30 includes a pattern. In order to transfer the pattern onto the substrate 20, the curved member 25 is rotated such that the pattern of each curved side is transferred onto the substrate. As shown in Figure 1, as the curved member 25 rolls over the substrate 20, the pattern of each curved side remains stationary relative to the curved side.

With this said, there is nothing in the cited portions of Jeans, Chichoni and any proper combination that remotely discloses, teaches or suggests these aspects of claim 1.

As conceded by the Office, Jeans does not disclose, teach or suggest that “as said curved member rolls over said substrate, said pattern of each of said curved sides remains stationary relative to each of said curved sides.” Nonetheless, the Office relies on Chichoni as allegedly disclosing, teaching or suggesting these aspects of claim 1. Applicant respectfully disagrees and submits that the modification of Jeans in view of Chichoni would render Jeans’ device unsatisfactory for its intended purpose. Thus, this proposed modification is improper. *See* MPEP 2143.01.

First, Chichoni’s stamp is not configured to roll over the substrate to transfer the pattern onto the substrate, as recited in claim 1. Rather, Chichoni’s stamp transfers the

pattern by relative vertical movements between the stamp 5 and the substrate. Specifically, Chichoni's stamp includes a stamp holder 6 that has a triangular cross-section. The stamp holder 6 includes three sides that each have a stamp 5. In operation, the stamp holder 6 can be rotated only to present a side of the holder 6 to a correct position. Once a side of the holder is correctly positioned, the holder 6 is placed and blocked in the upper position with pins 7 and 8 and transfer of the pattern of the stamp 5 begins. See Chichoni at page 1, lines 21-24 and page 2, lines 4-8 and Figures 2-3. Thus, transfer of the pattern from the stamp to the substrate in Chichoni is not effected by rolling the stamp over the substrate. As such, it is clear that Chichoni cannot possibly disclose, teach or suggest the aspects of "as said curved member rolls over said substrate, said pattern of each of said curved sides remains stationary relative to each of said curved sides." Accordingly, any proper combination of the cited portions of Jeans and Chichoni cannot result, in any way, in the invention of claim 1.

Second, Chichoni's stamp does not have any curved sides. Rather, the stamp holder 6 has flat sides that each support a flat stamp 5. Thus, if it is the Office's position that one skilled in the art could have substituted the stamp holder 6 for the stamp arrangement of Jeans, then such a substitution would not have resulted in the invention of claim 1. In this regard, Applicant respectfully submits that the combination of Jeans and Chichoni does not result, in any way, in a stamp mechanism having both separate curved sides and a pattern that remains stationary relative to a respective curved side as the curved member rolls over the substrate. Indeed, the curvature of the "sides" defined by the three rollers 103 in Jeans is an essential characteristics of the stamp mechanism that enables to simultaneously rotate the belt 100 and transfer the pattern to the moving substrate 101. That is, with this configuration, the belt 100 can effectively be rotated with rollers 103 and cover portion of the cylindrical backing drum 105 to transfer the pattern on the substrate 101. Thus, the curvature of the "sides" defined by the three rollers 103 cannot be dissociated with the aspect of transferring the moving pattern on the moving substrate. Therefore, substituting the flat stationary stamp 5 of Chichoni for the curved moving belt 100, as suggested by the Office, necessarily requires eliminating the three rollers 103 and the drum 105 and, therefore, the "curved sides" of Jeans' stamp mechanism, because the flat stamp 5 of Chichoni is not usable with a curved substrate (as it is in Jeans) and *vice versa*. As a result, as noted above, such a substitution would not result in the invention of claim 1.

Along these lines, the proposed modification of Jeans in view of Chichoni would render Jeans' device unsatisfactory for its intended purpose. This is improper. See MPEP 2143.01 "If proposed modification would render the prior art invention being modified

unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification.” *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). As explained in *Jeans*, the pattern of *Jeans* is embossed on the flexible substrate 101 by rotating the embossing belt 100 using rotating rollers 103. *See Jeans* at Figures 38-39. As shown in Figures 38 and 39 of *Jeans*, as the embossing belt 100 is rotated by the rollers 103, the pattern on the belt 100 is transferred onto the movable substrate 101. Thus, in *Jeans*, the embossing belt 100 must be rotated by the rollers 103 or rolled over the substrate 101 in order to transfer the pattern on the movable substrate 101. Therefore, in *Jeans*, the pattern of the belt 100 must move relative to the areas defined by the three rollers in order to transfer the pattern onto the substrate 101. This is in contrast with the device of *Chichoni*, in which the stamp mechanism and stamp holder 6 do not rotate or roll over the substrate to transfer the pattern on the substrate. Rather, as noted above, once a side of the holder 6 is correctly positioned by rotation, the holder 6 is placed and blocked in the upper position with pins 7 and 8 and transfer of the pattern of the stamp 5 begins. Thus, it is clear that if one were to substitute the stamp holder 6 of *Chichoni* for the movable belt 100 of *Jeans*, it would not be possible to transfer the pattern over a moving substrate, which would render *Jeans*’ system unsatisfactory for its intended purpose. Accordingly, there is no motivation or suggestion to modify the stamp of *Jeans* in the manner suggested by the Office.

Claims 2-7 are patentable over the cited portions of *Jeans*, *Chichoni* and any proper combination thereof at least by virtue of their dependency from claim 1 and for the additional features recited therein.

Claim 10 is patentable over the cited portions of *Jeans*, *Chichoni* and any proper combination thereof for at least similar reasons as provided above for claim 1 and for the features recited therein. For example, the cited portions of *Jeans*, *Chichoni* and any proper combination thereof fail to disclose, teach or suggest a printing apparatus for nanometric scale imprinting, comprising, *inter alia*, “a curved member carrying a stamp surface having a plurality of separate curved sides, each of said curved sides including a pattern wherein, in use, said curved member is configured to roll over a substrate to transfer said pattern onto said substrate such that, as said curved member rolls over said substrate, said pattern of each of said curved sides remains stationary relative to each of said curved sides...”

Claims 11-14 are patentable over the cited portions of *Jeans*, *Chichoni* and any proper combination thereof at least by virtue of their dependency from claim 10 and for the additional features recited therein.

Accordingly, reconsideration and withdrawal of the rejection of claims 1-7 and 10-14 under 35 U.S.C. §103(a) based on Jeans in view of Chichoni are respectfully requested.

Claims 8 and 15 were rejected under 35 U.S.C. §103(a) based on Jeans in view of Chichoni as applied to claims 1, 10 and 11 above and further in view of U.S. Pat. No. 6,362,804 to Hamilton. The rejection is respectfully traversed.

Claims 8 and 15 are patentable over the cited portions of Jeans, Chichoni and any proper combination thereof at least by virtue of their dependency from claims 1 and 10, respectively, and for the additional features recited therein.

The cited portions of Hamilton fail to remedy the deficiencies of Jeans and Chichoni. The cited portions of Hamilton disclose a method of making a cathode ray tube with an integral light trapping filter. The filter of Hamilton is assembled in the following manner. A face plate 104 is mounted on a suitable support 106. Guide pins 108 are formed on the interior concave surface of the face plate 104. A film of emulsion 110 is laid down directly on the inner wall 112 of face plate 104. A spherically curved mask 114 (identified by the Examiner as the "curved member" of claim 1) is provided with guide apertures 116 which fit accurately on guide pins 108. *See* Hamilton at col. 7, lines 10-31 and FIG. 17. With this said, the cited portions of Hamilton do not disclose, teach or suggest a printing apparatus, comprising, *inter alia*, "a curved member carrying a stamp surface having a plurality of separate curved sides, each of said curved sides including a pattern, wherein, in use, said curved member is configured to roll over a substrate to transfer said pattern on said substrate such that, as said curved member rolls over said substrate, said pattern of each of said curved sides remains stationary relative to each of said curved sides..." as recited in claim 8 or a printing apparatus for nanometric scale imprinting, comprising, *inter alia*, "a curved member carrying a stamp surface having a plurality of separate curved sides, each of said curved sides including a pattern wherein, in use, said curved member is configured to roll over a substrate to transfer said pattern onto said substrate such that, as said curved member rolls over said substrate, said pattern of each of said curved sides remains stationary relative to each of said curved sides..." as recited in claim 15. Therefore, any proper combination of the cited portions of Jeans, Chichoni and Hamilton cannot result, in any way, in the invention of claims 8 and 15.

Accordingly, reconsideration and withdrawal of the rejection of claims 8 and 15 under 35 U.S.C. §103(a) based on Jeans in view of Chichoni and further in view of Hamilton are respectfully requested.

Claims 16 and 17 have been added to define additional subject matter that is novel and non-obvious. Claims 16 and 17 are patentable at least by virtue of their dependency from claims 1 and 10, respectively, and for the additional features recited therein.

All rejections having been addressed, it is respectfully submitted that the present application is in a condition for allowance and a Notice to that effect is earnestly solicited.

If any point remains in issue which the Examiner feels may be best resolved through a personal or telephone interview, please contact the undersigned at the telephone number listed below.

Please charge any fees associated with the submission of this paper to Deposit Account Number 033975. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,

PILLSBURY WINTHROP SHAW PITTMAN LLP



CHRISTOPHE F. LAIR

Reg. No. 54248

Tel. No. 703.770.7797

Fax No. 703.770.7901

JSB/CFL/pj
P.O. Box 10500
McLean, VA 22102
(703) 770-7900